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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/817,659	03/26/2001	Shekhar Y. Borkar	42390P10820	9789

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EXAMINER

VO, TIM T

ART UNIT	PAPER NUMBER
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2112

DATE MAILED: 03/15/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/817,659

Applicant(s)

BORKAR ET AL.

Examiner

Tim T. Vo

Art Unit

2112

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment filed on 1/2/04.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10 is/are allowed.
- 6) ☒ Claim(s) 11-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Part III DETAILED ACTION

Notice to Applicant(s)

This application has been examined. Claims 1-28 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 11-12, 17-23 and 28 are rejected under 35 U.S.C. § **102(b)** as being anticipated by "Command Response Bus System With Inherent Fault-Isolation Features" by IBM Technical Disclosure Bulletin, August 1986 referred hereinafter "IBM".

As for claim 11, IBM teaches a system comprising:

a group of integrated circuits connected in a pseudo ring fashion (see figure 2, wherein page 2 refers integrated circuits UARTs are connecting in a ring topology), wherein the pseudo ring is created by data flow of bi-directional signaling between the integrated circuits (see pages 3-7 which refer to data flows bi-directional).

As for claim 20, IBM teaches a system comprising:

a group of integrated circuits connected in a pseudo differential arrangement in which multiple conductors carrying signals share a common reference signal conductor

Art Unit: 2112

(see figure 1, page 2 refers wherein the integrated circuits UARTs are connecting to each other through a common bus).

As for claims 12 and 21-22, IBM teaches the truncated ring is a multidimensional ring (see figure 2).

As for claims 17 and 28, IBM teaches one of the integrated circuits acts as a master controller for the other integrated circuits (see figure 5 and pages 5-6 refers to one of the microprocessor interface 8 acts as a master to control data path flow).

As for claim 18, IBM teaches the integrated circuits use differential signaling (see figure 1 which refers to data flow between integrated circuits via a common bus).

As for claim 19, IBM teaches the integrated circuits use differential signaling (see pages 5-6 which refers to data flow between integrated circuits).

As for claim 19, IBM teaches the integrated circuits use differential signaling (see pages 5-6, which refers to data flow between integrated circuits).

As for claim 23, IBM teaches wherein some of the signal carrying conductors have one reference signal conductor and others of the signal carrying conductors have another reference signal conductor (see figures 2-4 and pages 3-4 refers to drivers signaling conductor in multi directional).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 2112

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 13-16 and 24-27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over IBM.

As for claims 13-16 and 24-27, IBM does not expressly teach terminator resistor in packaging of its die. The terminator resistor includes in a packaging is well known and expected in the art which is admitted by the applicants (see "Prior Art" figures 1-3 of the current invention). It would have been obvious to include terminator resistor to the IBM's because the terminator resistor is well known to providing impedance matching and preventing signal reflection.

Response to Arguments

3. Applicant's arguments filed 1/2/04 have been fully considered but they are not persuasive. The applicant argues that the IBM teaches the physical bus is not a ring. figures 2-4 of the IBM discloses bus A and bus B. Each of the bus forms a close loop for communication from unit #1 to Unit #N. Further, figure 4, discloses a ring bus from slave # (n-1) to slave # 1. These figures clearly disclose the devices are communicating to each other via the ring of bus A and bus B.

4. The applicant argues that the IBM does not teach a common reference signal. As explained above, the devices are connecting to the bus A and the bus B in a loop. Thus bus A and bus B transmits data in the opposite direction (see page 4). Examiner's interpretation for a common reference signal is the direction signal on either bus A or bus B.

Examiner's Statement of Reasons for Allowance

5. Claims 1-10 are allowable over the prior of records.
6. The following is an Examiner's statement of reasons for the indication of allowable subject matter: Claims 1-10 are allowable over the prior art of record because the Examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine any of the said prior arts. Prior art fails to teach when additional integrated circuits to be added to the ring, wherein when the truncated ring is open, one of the integrated circuits immediately next to the truncated region can communicate only in the direction opposite the truncated region and wherein when the truncated ring is closed, the integrated circuit immediately next to the truncated region can also communicate in the direction toward the truncated region.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim T. Vo whose telephone number is 703-308-5862. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 703-305-4815. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2112

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Tim Vo', is positioned above the printed name and title.

Tim T. Vo
Primary Examiner
Art Unit 2112

3/11/04